

**WASHINGTON DEPARTMENT OF ECOLOGY
MAIL STOP 47600
OLYMPIA, WASHINGTON 98504**

IN THE MATTER OF:

**North Pacific Paper Company, LLC
P.O. Box 2069
Longview, WA 98632**

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PSD 97-01, AMENDMENT 4

Pursuant to the U.S. Environmental Protection Agency (EPA) regulations for the Prevention of Significant Deterioration (PSD) in Title 40, Code of the Federal Regulations (CFR), Part 52.21, the Washington State Department of Ecology (Ecology) general regulations for air pollution sources, Chapter 173-400 Washington Administrative Code (WAC), and based upon the complete PSD Administrative Amendment Application submitted by North Pacific Paper Company, LLC on November 25, 2016, Ecology now finds the following:

FINDINGS

1. The North Pacific Paper Company's Longview facility is a paper manufacturing facility, which consists of three paper machines, a thermo-mechanical pulping (TMP) process, and a de-inking process. The North Pacific Paper Company bought the facility from Weyerhaeuser NORPAC on November 1, 2016.
2. This permit is an administrative amendment to reflect the ownership change. This permit supersedes PSD 97-01, Amendment 3, issued on July 29, 2010.
3. The North Pacific Paper Company's Longview facility qualifies as a major source of air pollutants because it is listed as a major stationary source under Title 40, Code of the Federal Regulations, Part 51, Section 166, paragraph (b)(1)(i)(a) and has the potential to emit more than 100 tons per year of several pollutants.
4. The site of the project is within an area designated Class II for the purposes of PSD evaluation under 40 CFR 52.21 as amended through January 1, 1995.
5. This PSD approval covers two paper machines and TMP operations that comprise the NORPAC I and II projects. The No. 3 Paper Machine and de-inking process are part of the NORPAC III project, are not subject to PSD requirements.
6. The NORPAC I and II projects have the ability to produce many grades of paper, including newsprint and writing/book grades, at a combined production rate of 762,850 air-dried metric tons per year. Principal point sources of air contaminant emissions are:
 - 6.1. TMP Decker Exhausts (2)
 - 6.2. No. 2 (TMP) Spray Condenser Exhaust

6.3. Paper Machine No. 1 Vacuum Vent, Wet End Vents and Exhausts, and Dryer Vents

6.4. Paper Machine No. 2 Vacuum Vent, Wet End Vents and Exhausts, and Dryer Vents

7. In 1977, Ecology issued draft and final environmental impact statements (EIS) concerning the NORPAC I project. NORPAC submitted a Notice of Construction application to the Southwest Clean Air Agency (SWCAA) on February 1, 1978. On March 16, 1978, SWCAA issued Order of Approval No. 78-326 allowing construction of the NORPAC I project. At that time, SWCAA's Order of Approval was the only state or local air quality permit or approval required to allow commencement of construction of NORPAC I.
8. NORPAC II essentially duplicated the NORPAC I project. In July 1979, Ecology issued a declaration of significance in regard to the NORPAC II project, referring to the 1977 EIS for the NORPAC I project. NORPAC submitted a Notice of Construction application to SWCAA in July 1979. On August 23, 1979, SWCAA issued Order of Approval No. 79-475 allowing construction of the NORPAC II project. At that time, SWCAA's Order of Approval was the only state or local air quality permit or approval required allowing commencement of construction of NORPAC II.
9. PSD 97-01 was issued on December 9, 1997. The emission limits were based upon the combined production of 540,000 Air Dried Metric Tons (ADMT) of newsprint per year. This permit accounted for 515,000 ADMT of normal brightness paper per year and 25,000 ADMT of high brightness paper. These production rates were based on the paper grade production mix anticipated at the time to satisfy future market demand for varying paper basis weight and brightness specifications. Thermo-Mechanical Pulping (TMP) fiber production required to support these paper production levels was projected to be 415,307 Bone Dry Metric Tons (BDMT) of normal brightness TMP pulp and 22,750 BDMT of high brightness TMP pulp per year. The permit effectively limited high brightness pulp and paper production as a percentage of total pulp and paper production, and limited total pulp and paper production based on projected grade basis weight mix.
10. PSD 97-01, Amendments 1 and 2 were issued on March 25, 2004, and April 24, 2004, respectively. PSD 97-01, Amendment 2 was an administrative amendment to PSD 97-01, Amendment 1. The two amendments allowed for operating flexibility to produce increased volumes of high-brightness and high basis weight paper grades. These grades were allowed to represent up to 100 percent of total production. Annual potential production rates for the highest production rate grades were 542,117 BDMT/year of TMP pulp and 623,685 ADMT/year of paper. Emission limits were based on these maximum potential production rates, rather than on the projected actual production rates for the grade mix anticipated to meet future market demand. Ecology found that the project was not a "major modification" per 40 CFR Part 52.21 because there was no significant net emissions increase of any regulated PSD pollutant. Amendment 2 is subject to public review and comment because Weyerhaeuser is requesting a relaxation of source testing requirements. The emissions of all other air pollutants from the project were subject to new source review by Ecology's Industrial Section.

11. PSD 97-01, Amendment 3 was issued to:

11.1. Update volatile organic compound (VOC) and carbon monoxide (CO) emission factors to incorporate the results of 2008 and 2009 source testing at the NORPAC facility. This round of source testing showed that implementation of various energy conservation projects yielded significant emission reductions.

11.2. Revise VOC and CO emission limits using updated emission factors and revised production projections for thermo-mechanical pulping and paper production. Emission limits for VOC and CO are reduced by more than 60 percent each from limits in the 2004 amended permit. This equates to a reduction in allowable emissions of about 600 tons per year for VOC and 575 tons per year for CO.

11.3. Revise requirements for source testing for purposes of verifying the reasonableness of emission factors. This revision allows for a reduced testing frequency from once every three years to once every five years if two consecutive source tests indicate emission factor changes within +/- 20 percent of the 2008-2009 emission rates.

11.4. Update estimated maximum production rates. NORPAC I and II production rates for highest production grades will total up to 748,980 BDMT/year of pulp and 762,850 ADMT/year of paper. This maximum production capacity is based on a calculated daily maximum pulp production rate, 365 day/year operation, and a 95 percent paper machine operating rate.

12. To verify the reasonableness of the emission factors, source tests were conducted during 2012–2013, and again during 2015. Based on the tests results, Ecology concludes that the emission factors in the permit are still representative and do not need to be revised at this point.

13. Ecology finds that all requirements for approval of the PSD application are satisfied and that as approved below, the revised permit will continue to comply with all applicable federal new source performance standards. Approval of the PSD application is granted subject to the following conditions.

PSD APPROVAL CONDITIONS

1. VOC emissions from NORPAC I and II units shall not exceed 2,007 pounds per day when averaged over 30 consecutive days.
 - 1.1. Compliance with the daily VOC emission limit shall be assured by computing daily VOC emission rates from the NORPAC I and II units.
 - 1.2. Daily VOC emission rates shall be computed by summing daily production rates multiplied by the appropriate daily emission factors contained in *Table 1, NORPAC I & II VOC Emission Factors* of this permit. Such calculations shall account for all operations at each operating condition during each day of operation.
2. VOC emissions from the NORPAC I and II units shall not exceed 311.0 tons per year when averaged over any consecutive 12-month period.
 - 2.1. Compliance with the annual emissions limit shall be assured by the summation of monthly-calculated emission rates over the calendar year.
 - 2.2. Monthly emissions shall be calculated by multiplying monthly TMP and Paper Machine production values under each operating condition by the appropriate emission factors from *Table 1, NORPAC I & II VOC Emission Factors*, then summing the products. Such calculations shall account for all operations at each operating condition during the calendar month.
3. CO emissions from the NORPAC I and II units shall not exceed 307.6 tons per year when averaged over any consecutive 12-month period.
 - 3.1. Compliance with the annual emissions limit shall be assured by the summation of monthly-calculated emission rates over the calendar year.
 - 3.2. Monthly emissions shall be calculated by multiplying monthly TMP and paper machines production values under each operating condition by the appropriate emission factors from *Table 2, NORPAC TMP I & II CO Emission Factors* of this permit, then summing the products. Such calculations shall account for all operations at each operating condition during the calendar month.
4. North Pacific Paper Company, LLC shall conduct source tests of the NORPAC I and II emission units for VOC and CO. The source testing shall be performed by an independent testing firm.
 - 4.1. The emission points tested shall include those tested in the 2008-2009 emission evaluation program and serve as the basis for the refinement of emission factor summaries in Tables 1 and 2 of this permit.

- 170 4.1.1. On a case-by-case basis, Ecology may approve the exclusion of certain emission
171 points from a specific source testing program, based on safety, technical or other
172 emission unit-specific factors.
173
- 174 4.1.2. On a case-by-case basis, Ecology may approve the exclusion from a specific
175 source-testing program those emission units with estimated maximum emissions
176 less than two tons per year of VOC and less than five tons per year of CO, based
177 on results of the most recent source test.
178
- 179 4.1.3. North Pacific Paper Company, LLC shall demonstrate to the satisfaction of
180 Ecology why some emission points should not be tested during any particular
181 source testing program.
182
- 183 4.2. Further source testing shall be conducted in 2012 and 2015. If either the 2012 or the
184 2015 source testing indicates a significant deviation in the emission factors (± 20 percent
185 from the 2008–2009 emission factors), additional source testing shall be conducted once
186 every three years commencing in 2018. Otherwise, additional source testing shall be
187 conducted once every five years commencing in 2020.
188
- 189 5. The objective for this source testing is to verify the reasonableness of the emission factors
190 developed in the 2008–2009 emission evaluation program. Should there be a significant
191 deviation in the emission factors developed from subsequent testing (± 20 percent), either
192 Ecology or North Pacific Paper Company, LLC may initiate a technical discussion on the
193 need to amend the emission factors presented in Tables 1 and 2 of this permit, or Ecology
194 may require amendment of the emission factors in Tables 1 and 2.
195
- 196 6. All source tests shall be conducted in accordance with the appropriate methods set forth in
197 Title 40 Code of the Federal Regulations, Part 60, Appendix A as amended through July 1,
198 1996, or later.
199
- 200 6.1. Each performance test shall consist of three separate runs using the applicable test
201 method, with the overall test result to be an arithmetic average of the results of the three
202 test runs, in accordance with 40 CFR 60.8(f).
203
- 204 6.2. A test plan shall be submitted for Ecology's approval at least 30 days prior to the testing.
205
- 206 6.3. The source tests and test methods shall include, but may not be limited to, the following:
207
- 208 6.3.1. Sampling location and in-stack points as measured by Reference Method 1.
209
- 210 6.3.2. Stack gas velocity and volumetric flow rate as measured by Reference Method 2.
211
- 212 6.3.3. Carbon monoxide as measured by Reference Method 10.

- 213 6.3.4. Volatile organic compounds, as measured by Reference Methods 25, 25A, or
214 25B, modified as necessary to handle high moisture content. Any moisture
215 removed as a result of such modification shall be analyzed for VOCs, which shall
216 be accounted for.
217
- 218 6.4. Any deviation from the above test methods must be agreed to by Ecology in the test
219 plan.
220
- 221 7. North Pacific Paper Company, LLC shall maintain records of emissions calculations, which
222 will include:
223
- 224 7.1. The quantities of high brightness and normal brightness TMP pulp and paper produced
225 during the month.
226
- 227 7.2. The approximate percentages of wood specie types pulped during the month.
228
- 229 7.3. The appropriate emission factors from Tables 1 and 2.
230
- 231 7.4. North Pacific Paper Company, LLC shall report to Ecology, in a manner approved by
232 Ecology, the monthly cumulative total VOC and CO emissions, in units of the standard,
233 in the "monthly air report," in accordance with the requirements of WAC 173-401-615.
234
- 235 8. Each occurrence of calculated emissions in excess of limits contained in this PSD approval
236 shall be reported at least monthly within 30 days of the end of each calendar month to
237 Ecology. The information shall include, but not limited to, the following:
238
- 239 8.1. The time of the occurrence.
240 8.2. Magnitude of the emission or process parameters excess.
241 8.3. The duration of the excess.
242 8.4. The probable cause.
243 8.5. Any corrective actions taken or planned.
244
- 245 9. Any activity that is undertaken by North Pacific Paper Company, LLC, in a manner that is
246 inconsistent with the application and this determination, shall be subject to Ecology
247 enforcement under applicable regulations. Nothing in this determination shall be construed
248 so as to relieve North Pacific Paper Company, LLC of its obligations under any state, local,
249 or federal laws or regulations.
250
- 251 10. Access to the source by EPA, Ecology, or local regulatory personnel shall be permitted upon
252 request for the purpose of compliance assurance inspections. Failure to allow access is
253 grounds for action under the Federal Clean Air Act or the Washington Clean Air Act.
254
- 255 11. North Pacific Paper Company, LLC shall maintain and follow an O&M manual for the
256 facility. The O&M manual shall identify operational parameters and practices that will

constitute proper operation of each emission unit in NORPAC 1 or 2. The O&M manual shall be available for review by Ecology and EPA. Emissions that result from a failure to follow the requirements of the O&M manual may be considered credible evidence that emission violations have occurred. Ecology shall be notified whenever the manual is updated.

Reviewed by:



4/21/2017

Date

MengChiu Lim, P.E.
Science and Engineering Section
Air Quality Program
Washington Department of Ecology

Approved by:

A handwritten signature in blue ink, appearing to read "Kathy Taylor", written over a horizontal line.

4/21/2017

Date

Kathy Taylor, Ph.D.
Deputy Air Quality Program Manager
Air Quality Program
Washington Department of Ecology

284 **TABLE 1 - NORPAC I & II VOC EMISSION FACTORS, DAILY AND ANNUAL EMISSION RATES**

Source	Estimated Maximum Production Rate (daily)	Estimated Maximum Production Rate (yearly)	VOC Emission Factor	VOC Emissions (lb/day)	VOC Emissions (tons/year)
TMP #1 Process Vents Reboiler Online	Pulp production, 1080 (BDMT/day)	Pulp production, 374,490 (BDMT/year)	0.340 (lb C/BDMT)	367	63.7
TMP #1 Process Vents Reboiler Down	Pulp production, 0 (BDMT/day)	Pulp production, 0 (BDMT/year)	0.319 (lb C/BDMT)	0	0.0
TMP #2 Process Vents Reboiler Online	Pulp production, 1080 (BDMT/day)	Pulp production, 374,490 (BDMT/year)	0.340 (lb C/BDMT)	367	63.7
TMP #2 Process Vents Reboiler Down	Pulp production, 0 (BDMT/day)	Pulp production, 0 (BDMT/year)	0.319 (lb C/BDMT)	0	0.0
TMP Pressure Relief Valves B&C Open	Pulp production, 1080 (BDMT/day)	Pulp production, 149,796 (BDMT/year)	0.124 (lb C/BDMT)	268	9.3
PM 1	Gross Product, 1,000 (ADMT/day)	Gross Product, 346,750 (ADMT/year)	0.457 (lb C/ADMT)	457	79.2
PM 2	Gross Product, 1,200 (ADMT/day)	Gross Product, 416,100 (ADMT/year)	0.457 (lb C/ADMT)	548	95.1
Total VOC Emissions				2,007	311.0

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286 **TABLE 2 - NORPAC I & II CO EMISSION FACTORS AND ANNUAL EMISSION RATES**

Source	Estimated Maximum Production Rate (yearly)	CO Emission Factor	CO Emissions (tons/year)
TMP 1	Pulp production, 374,490 (BDMT/year)	0.805 (lb/BDMT)	150.7
TMP 2	Pulp production, 374,490 (BDMT/year)	0.805 (lb/BDMT)	150.7
PM 1	432 (MMcuFt/year)	15.2 (lb/ MMcuFt Natural Gas)	3.3
PM 2	385 (MMcuft/year)	15.2 (lb/ MMcuFt Natural Gas)	2.9
Total NORPAC 1&2 CO Emissions (Tons/yr)			307.6

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